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Measurement of High-pT Identified Charged Hadrons
in $\sqrt{s_{NN}} = 200$ GeV Au+Au Collisions at RHIC-PHENIX

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One of the remarkable observations in $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions at RHIC is the particle-type dependence of hadron yield suppression at intermediate pT (2-4 GeV/c). There is a significant suppression in the neutral pion and charged hadron yields, compared to expectations from scaled p+p results. In contrast, large enhancement of (anti)protons relative to pions is observed at intermediate pT.

The pT reach of identified particles is extended by high statistics data and the introduction of an aerogel Cherenkov detector. We can study the identified charged hadron production at higher pT. The study could be effective to understand the mechanism of the observed particle suppression and enhancement.

Data taken in different collision systems (Au+Au/Cu+Cu) at different beam energies allows us to make systematic comparisons of the hadron production as a function of beam energy and system size. These comparisons could be helpful for our understanding, as well.

We will present pT spectra, particle ratios, nuclear modification factors and their scaling properties between different collision systems.